

II. REMARKS

As noted above, the Response filed on January 2, 2002 was deemed non-responsive in that the Restriction/Election of Species Requirement was not adequately addressed. Applicants gratefully acknowledge Examiner Brusca's phone message relaying this decision and providing the opportunity to submit this Supplemental Amendment to fully address the Restriction/Election Requirement.

Claims 1-17 were pending and were subject to a restriction requirement. Additionally, previous claims 1 and 8 were rejected. Claims 2-17 have been canceled by amendment herein, without prejudice or disclaimer. Thus, Applicants reserve the right to pursue the subject matter of these claims in a continuation or divisional application filed during the pendency of this application.

Claim 1 has been amended to specify certain amino acid sequences within Table 6 (as well as the nucleotide sequences to which these amino acids bind). New claims 18 to 23 have been added and are directed to the specific zinc finger proteins of claim 1 and Table 6. Support for the amendments and new claims can be found in original claim 1 and Table 6. No new matter has been added as a result of this amendment and entry thereof is respectfully requested.

Thus, in light of the Restriction/Election Requirement and amendments herein, claim 1 and 18 to 23 are pending and claim 18 is under consideration.

Restriction/Election Requirement

Restriction as between Group I (claims 1-12, 14, 16, drawn to zinc finger proteins) and Group II (claims 13, 15, and 17, drawn to polynucleotides encoding zinc finger proteins) was required. In addition, for each Group, Applicants were required to elect a single amino acid sequence.

Applicants elect Group I, directed to zinc finger proteins. The Group includes new claims 18 to 23. Furthermore, Applicants elect the amino acid sequence SEQ ID NO:4043, falling into both claim 1 and claim 18. It is to be understood that this election of species is for

the purposes of preliminary search and examination only, and that upon allowance of a generic claim, Applicants will be entitled to consideration of claims to the additional species.

Information Disclosure Statement

Reference HK in the IDS was not considered because no date or place of publication was indicated on the Form 1449. Applicants note that HK is a sequence alignment and that the 1449 form indicates it was performed and printed in August, 2000 (i.e. the date of publication).

Response Filed October 20, 2000

Applicants apologize for any confusion caused by failure of previous representatives to indicate changes made to the claims in their preliminary amendment filed October 20, 2000. Applicants gratefully acknowledge the Examiner's underlining of "SEQ ID NOs:" to rectify this error.

Specification

The specification is objected to for improper priority application language. By amendment herein, the claim for priority in the application has been amended as required by the Office. Additionally, the serial number of the third-referenced priority application has been corrected, as indicated on the request for corrected filing receipt, filed on December 31, 2001.

35 U.S.C. 112, Second Paragraph

Claims 1 to 8 were rejected as allegedly indefinite as not being clear in being drawn to single zinc finger polypeptide or a polypeptide that comprises a zinc finger domain. By amendment herein, claim 8 has been canceled and claim 1 has been amended to clarify that the claims at issue are directed to the specifically recited zinc finger polypeptides.

35 U.S.C. 102(e)

Claims 1 and 8 were rejected as allegedly anticipated by U.S. Patent No. 6,140,081 (hereinafter "Barbas"). The cancellation of claim 8 by amendment herein obviates the rejection with respect to this claim.

Further, with respect to amended claim 1 and new claims 18-23, Applicants submit that this reference is not relevant. Indeed, whereas Barbas is directed to zinc finger-nucleotide binding polypeptide having specificity for GNN nucleotides, the claimed zinc finger polypeptides exhibit binding specificity for non-GNN nucleotides.

III. CONCLUSION

In view of the foregoing amendments and remarks, Applicants believe the claims are in condition for allowance and request early notification to that effect.

Respectfully submitted,

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Version Showing Changes Made to Specification

The paragraph beginning on page 1, line 6 has been amended as follows:

--The present application claims [priority the] the benefit of U.S. provisional applications 60/126,238 filed March 24, 1999, 60/126,239 filed March 24, 1999, [60/146,596] 60/146,595 filed July 30, 1999 and 60/146,615 filed July 30, 1999, all of which are hereby incorporated by reference in their entirety for all purposes.--

Version Showing Changes Made to Claims

1. (Amended) A zinc finger which binds to a target subsite wherein amino acids -1 to +6 of the zinc finger [and the nucleotide sequence of the target subsite are as specified in Table 6] are selected from the group consisting of RXDHXXQ (SEQ ID NO:4043), RXDAXXQ (SEQ ID NO:4044), RXDHXXE (SEQ ID NO:4045), RXDNXXT (SEQ ID NO:4041), RXDDXXK (SEQ ID NO:4026) and TXDHXXS (SEQ ID NO:4042), wherein SEQ ID NO:4043 binds to the target subsite comprising the nucleotide sequence AGG, SEQ ID NO: 4044 binds to the target subsite comprising the nucleotide sequence ATG, SEQ ID NO:4045 binds to the target subsite comprising the nucleotide sequence CGG, SEQ ID NO:4041 binds to the target subsite comprising the nucleotide sequence TAG; SEQ ID NO:4026 binds to the target subsite comprising the nucleotide sequence TCG and SEQ ID NO:4042 binds to the target subsite comprising the nucleotide sequence TGT.

2 to 17. Canceled.

18. (New) A zinc finger protein which binds to a target subsite, said zinc finger protein comprising the amino acid sequence RXDHXXQ (SEQ ID NO:4043) which binds to the target subsite comprising the nucleotide sequence AGG.

19. (New) A zinc finger protein which binds to a target subsite, said zinc finger protein comprising the amino acid sequence RXDAXXQ (SEQ ID NO:4044) which binds to the target subsite comprising the nucleotide sequence ATG.

20. (New) A zinc finger protein which binds to a target subsite, said zinc finger protein comprising the amino acid sequence RXDHXXE (SEQ ID NO:4045) which binds to the target subsite comprising the nucleotide sequence CGG.

21. (New) A zinc finger protein which binds to a target subsite, said zinc finger protein comprising the amino acid sequence RXDNXXT (SEQ ID NO:4041) which binds to the target subsite comprising the nucleotide sequence TAG.

22. (New) A zinc finger protein which binds to a target subsite, said zinc finger protein comprising the amino acid sequence RXDDXXK (SEQ ID NO:4026) which binds to the target subsite comprising the nucleotide sequence TCG.

23. (New) A zinc finger protein which binds to a target subsite, said zinc finger protein comprising the amino acid sequence TXDHXXS (SEQ ID NO:4042) which binds to the target subsite comprising the nucleotide sequence TGT.

Currently Pending Claim Set

1. (Amended) A zinc finger which binds to a target subsite wherein amino acids -1 to +6 of the zinc finger are selected from the group consisting of RXDHXXQ (SEQ ID NO:4043), RXDAXXQ (SEQ ID NO:4044), RXDHXXE (SEQ ID NO:4045), RXDNXXT (SEQ ID NO:4041), RXDDXXK (SEQ ID NO:4026) and TXDHXXS (SEQ ID NO:4042), wherein SEQ ID NO:4043 binds to the target subsite comprising the nucleotide sequence AGG, SEQ ID NO:4044 binds to the target subsite comprising the nucleotide sequence ATG, SEQ ID NO:4045 binds to the target subsite comprising the nucleotide sequence CGG, SEQ ID NO:4041 binds to the target subsite comprising the nucleotide sequence TAG, SEQ ID NO:4026 binds to the target subsite comprising the nucleotide sequence TCG and SEQ ID NO:4042 binds to the target subsite comprising the nucleotide sequence TGT.

2 to 17. Canceled.

18. (New) A zinc finger protein which binds to a target subsite, said zinc finger protein comprising the amino acid sequence RXDHXXQ (SEQ ID NO:4043) which binds to the target subsite comprising the nucleotide sequence AGG.

19. (New) A zinc finger protein which binds to a target subsite, said zinc finger protein comprising the amino acid sequence RXDAXXQ (SEQ ID NO:4044) which binds to the target subsite comprising the nucleotide sequence ATG.

20. (New) A zinc finger protein which binds to a target subsite, said zinc finger protein comprising the amino acid sequence RXDHXXE (SEQ ID NO:4045) which binds to the target subsite comprising the nucleotide sequence CGG.

21. (New) A zinc finger protein which binds to a target subsite, said zinc finger protein comprising the amino acid sequence RXDNXXT (SEQ ID NO:4041) which binds to the target subsite comprising the nucleotide sequence TAG.

22. (New) A zinc finger protein which binds to a target subsite, said zinc finger protein comprising the amino acid sequence RXDDXXK (SEQ ID NO:4026) which binds to the target subsite comprising the nucleotide sequence TCG.

23. (New) A zinc finger protein which binds to a target subsite, said zinc finger protein comprising the amino acid sequence TXDHXXS (SEQ ID NO:4042) which binds to the target subsite comprising the nucleotide sequence TGT.